

### **REMARKS**

Claims 1–25 are now pending in the application. Applicants respectfully traverse and request reconsideration.

#### **Specification Objection**

The Examiner objects to the specification because a brief summary of the disclosure is allegedly missing. 37 C.F.R. § 1.73 states that “[a] brief summary of the invention indicating its nature and substance, which may include a statement of the object of the invention, should proceed the detailed description.” Notably, 37 C.F.R. § 1.73 uses the permissive word should rather than the nonpermissive word must. Accordingly, Applicants submit that 37 C.F.R. § 1.73 does not require a summary of the disclosure, but merely suggests that a summary can be desirable. In any event, Applicants note that although a summary subheading has not been provided in the present disclosure, a summary of the disclosure has been provided in the two paragraphs preceding the paragraph starting with the phrase “Referring now to Figure 1.” Therefore, reconsideration and withdrawal of the objection is respectfully requested.

The Examiner objects to the title of the invention alleging that the title is not descriptive. Applicants respectfully disagree. However, in the interest of timely prosecution, Applicants have amended the title to “METHOD AND APPARATUS FOR PROCESSING REAL-TIME COMMAND INFORMATION,” which corresponds to at least independent claims 1, 6, 10, 13, and 20. Therefore, reconsideration and withdrawal of the objection to the title is respectfully requested.

The Examiner objects to the abstract because it repeats information given in the title. In the interest of timely prosecution, Applicants have amended the Abstract to remove the phrase “for processing real-time information.” As such, the title and abstract no longer include repeated

information. Therefore, reconsideration and withdrawal of the objection to the Abstract is respectfully requested.

**Rejection Under 35 U.S.C. § 101**

Claims 23–25 stand rejected under 35. U.S.C. § 101 because the claimed invention is allegedly directed to nonstatutory subject matter.

The Examiner merely states that claims 23–25 do not fall within one of the four enumerated categories of patentable subject matter recited in 35 U.S.C. § 101 (e.g., a process, machine, article of manufacture, or composition of matter). The Examiner merely provides a conclusive statement that the claims allegedly constitute nonstatutory subject matter without an explanation as to why the claims allegedly constitute nonstatutory subject matter.

Applicants object to this rejection for at least the reason that no explanation has been given as to why the aforementioned are allegedly nonstatutory. Accordingly, a *prima facie* case has not been established. Applicants kindly remind the Office that MPEP § 2106(IV)(B) states that “[t]he burden is on the [Examiner] to set forth a *prima facie* case of unpatentability.” “After the examiner identifies and explains in the record the basis for why a claim is for an abstract idea with no practical application, then the burden shifts to the applicant to either amend the claim or make a showing of why the claim is eligible for patent protection.” MPEP § 2106(IV)(D).

Claims 23–25 are directed to a graphics controller, which is at least a machine or article of manufacture. Furthermore, claim 23 includes a command processor, a first real time event engine, and a first real time command buffer all of which are discrete physical components of the graphics controller. Claim 24 includes a second real time event engine and a second real time command buffer all of which are discrete physical components of one embodiment of the graphics controller. Claim 25 depends on claim 24 and recites a relationship between the first and second real time event engines. Accordingly, Applicants submit that claims 23–25 are

directed to statutory subject matter. Therefore, reconsideration and withdrawal of the rejection of claim 23–25 is respectfully requested.

**Rejection Under 35 U.S.C. § 103**

Claims 1–25 stand rejected under 35 U.S.C. § 103 as being unpatentable over Applicants admitted prior art (Figs. 1 and 2) in view of Wilt et al. (U.S. Pat. Pub. No. 20030140179).

With regard to claim 1, the Office Action alleges that Applicants admitted prior art teaches detecting a real time event and causing commands in a real time event command buffer to be fetched and consumed in response to the real time event. Applicants respectfully submit that the admitted prior art is being misapprehended. The admitted prior art discloses two variations of known command processing systems. The first command processing system includes a host that provides an input command to a command buffer. The command buffer then forwards a topmost command to a graphics engine, which receives and renders graphics for display. The graphics engine includes a command processor operably coupled to a two-dimensional graphics engine, a DMA, and a display engine. The command processor receives the command from the command buffer and provides the command to one of the engines, which may execute the command as needed.

The second command processing system consists of a central processing unit (CPU) operably coupled to a north bridge. The north bridge is coupled to system memory having a low priority buffer and a high priority buffer. In addition, the north bridge is operably coupled to a graphics controller, which consists of a command processor and a plurality of engines (e.g., a two-dimensional engine, a DMA, a three-dimensional engine, and a display engine). The graphics controller is operably coupled to a video memory having a buffer. When the CPU seeks to execute a command, the command is provided to the north bridge. The north bridge subsequently accesses memory and places the command in either the low priority buffer or the

high priority buffer. The north bridge accesses either the low or high priority buffer and provides the command to the command processor of the graphics controller. The command processor subsequently provides the command to one of the plurality of engines.

Applicants can find no mention of detecting a real time event in the cited portions of the admitted prior art. Nor can Applicants find any mention of causing commands in a real time event command buffer to be fetched and consumed in response to the real time event in the cited portions of the admitted prior art.

Wilt et al. fail to cure the deficient teachings of the admitted prior art. The Examiner cites paragraphs 10–12 and 102–112 of Wilt et al. as disclosing “a real time event command buffer.” However, as best understood by Applicants, paragraphs 10–12 of Wilt et al. merely disclose a system and method for managing computational resources of a coprocessor, such as graphics processor, in a computing system. The system and method manage computational resources of coprocessors to facilitate execution of multiple applications in a multitasking environment. The system and method manage the computational resources by enabling multiple threads of execution to compose command buffers in parallel, submitting those command buffers for scheduling and dispatch by the operating system, and fielding interrupts that notify of completion of command buffers.

As best understood by Applicants, paras. 102–112 merely disclose various embodiments of a driver used in accordance with the aforementioned system that translates runtime level commands into hardware specific commands. For example, one driver uses a runtime (e.g., a middleware provided in the operating system that an application uses) to emit a hardware independent stream of commands into a command buffer. The application calls lower level object code in connection with the runtime. When a DrawPrimitives2 (DP2) token stream is

submitted, a kernel transition occurs and the driver translates the DP2 token stream into hardware specific commands in the kernel mode.

Applicants can find no mention of a real time event command buffer in the cited portions of Wilt et al. Furthermore, Applicants can find no mention of detecting a real time event in the cited portions of Wilt et al. Nor can Applicants find any mention of causing commands in a real time event command buffer to be fetched and consumed in response to the real time event in the cited portions of Wilt et al. Therefore, reconsideration and withdrawal of the rejection of claim 1 is respectfully requested.

Claims 6, 10, 13, 20, and 23 are allowable for at least similar reasons as claim 1. Therefore reconsideration and withdrawal of the rejection of claims 6, 10, 13, 20, and 23 is respectfully requested.

Claims 2-5, 7-9, 11-12, 14-19, 21-22, and 24-25 each ultimately depend on claims 1, 6, 10, 13, 20, and 23, respectfully, and are allowable for at least similar reasons. Therefore, reconsideration and withdrawal of the rejection is respectfully requested.


### **CONCLUSION**

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is

respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (312) 609-7599.

Respectfully submitted,

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